ABSTRACT

A hard disk drive, and method and computer program therefor, comprising a hard disk having one or more spiral servo tracks written thereon, wherein each of the servo tracks comprises servo data comprising one or more synchronization symbols; a head adapted to produce a waveform as the head moves across the servo track; a sampler adapted to obtain a plurality of samples of the waveform, wherein the plurality of samples of the waveform comprises one of the synchronization symbols; and a processor adapted to determine an estimated location of a peak amplitude of the waveform with respect to the plurality of samples of the waveform, determine a sampling phase defined by a number of the samples between one of the synchronization symbols and a predetermined one of the samples of the waveform, determine a compensation amount based on a compensation curve and the sampling phase, determine a refined estimated location of the peak amplitude of the waveform based on the estimated location of the peak amplitude of the waveform and the compensation amount, and determine the location of the center of the servo track based on the refined estimated location of the peak amplitude of the waveform.